

Introduced weeds in the Vegetation of Mysore District¹

R. R. RAO²

AND

K. SURYANARAYANA³

INTRODUCTION

Karnataka has no flora of its own, though parts of the state are covered by the floras of Madras (Gamble 1915-36), Bombay (Cooke 1901-1908), Bangalore (Ramaswamy & Razi 1973) and Hassān (Saldanha 1976). Flora of Mysore district (Rao 1973) is one more step towards the ultimate achievement of the flora of the state of Karnataka.

During the course of preparation of a flora of Mysore district, a large number of 'weedy species' which have not been mentioned or mentioned only as a casual reference in many of the South Indian floras were encountered; and some of these are of recent introductions—(Ramaswamy *et al.* 1972-73).

The flora of Mysore district is now fairly well-known mainly through the works of Barnes (1944), Naithani (1966), Kammathy *et al.* (1967), Razi & Rao (1971), Rao (1971-72, 1973), Rao & Razi (1973-74), Bhaskar & Razi (1973). But a systematic study on introduced elements has not been made hitherto, though Ramaswamy *et al.* (1972-73) have published a small note on the adventive species in the district. Elsewhere, in the country similar studies have been carried out and have received

much attention (Prain 1890; Brühl 1908; Kashyap 1924; Biswas 1934; Raizada 1935, 1936; Mooney 1950; Srivastava 1954, 1964; Maheshwari 1960, 1962). The present study from Mysore district is to fill such a lacuna and is hoped that this will induce others also towards such studies in other parts of the country.

Exotic weeds have been established in our country ever since the time of Portuguese settlement in India (15th century). They introduced economically important plants brought from Brazil, Mexico, parts of Africa and other places on their commercial route. Later, many British Officers and travellers interested in gardening also introduced many ornamental as well as medicinal plants from other countries to India; along with these useful plants, seeds of many of the obnoxious weeds also got introduced by some way or other and thus got established on the new soil.

Calcutta, ever since the establishment of the Royal Botanic Garden (now Indian Botanic Garden) in 1787 has been the active centre for introduction and acclimatisation of many useful plants; and thus is also a source for spread of many foreign weeds from this garden.

India being a vast country has a varied type of climate, topography, soil types and other factors, which are suitable for the growth of plants from practically all regions of the world. Though, this is beneficial in a way to introduce

¹ Accepted October 1976.

² Department of Botany, School of Life Sciences, North-Eastern Hill University, Shillong-793 003.

³ Department of Botany, Yuvaraja's College, University of Mysore, Mysore-570 005.

any economically important plants, at the same time provides a congenial habitat for the growth of 'nature selected weeds'.

Thus, these foreign weeds once introduced have acclimated on the new soil and naturalised themselves in such a way that they now seem to be part of the native flora. These weeds after their introduction have spread to all parts by various factors, man being the only major biotic factor. Some of the important factors responsible for the spread of these weeds are shifting cultivation, deforestation, faulty pasturage methods, methods of harvesting, sale and introduction of impure seeds, sowing impure seeds on cultivated and uncultivated lands, construction of roads and railway lines, etc. (Maheshwari 1962). While weeds like *Croton bonplandianum*, *Acanthospermum hispidum*, *Alternanthera* sp. are accidental introductions; *Eupatorium odoratum*, *Lantana camara*, *Eichhornia crassipes*, *Datura metel* and others are species introduced as ornamentals or for their medicinal value.

Mysore district is the southernmost portion of the state of Karnataka, and lies between 11° 36'-12° 42' N lat. and 76° 55'-77° 45' E long. The vegetation of the district is interesting with a variety of forest types (Rao & Razi 1973-74). In Mysore district majority of the weeds thus established are from Tropical America or Africa and a few from Europe and Australia (Table 2).

There are 184 introduced species in the present vegetation of Mysore district spread over 49 families and 128 genera; and this approximately constitutes 11.5% of the introduced flora as against 40% recorded for India (Maheshwari 1962).

Asteraceae tops the list of introduced species both in the number of species as well as in their abundance in the district. Another noteworthy observation is that this is one of the families to establish very quickly, thereby becoming adven-

tive in nature. There are many reasons for the quick establishment and spread of these Asteraceae species. The main features being the production of enormous amount of seeds and secondly their effective mode of dispersal. *Eupatorium odoratum* for example was introduced to India when the FLORA OF BRITISH INDIA (Hooker 1872-1897) was being written. It is said that this plant was somehow got introduced in to Kerala state from Assam region by the labourers returning from the Assam front about 15 years ago. By 1973 when Flora of Mysore (Rao 1973) was explored this was the most dominant weed all round Karapura, Kakanakote and Heggadadevanakote forests replacing all other weedy species, including *Lantana camara*. This is indicative of the adventive nature of the species. Another species of the family having a similar history is *Parthenium hysterophorus*. This species was recorded for the first time in India in 1951 from Poona (Rao 1956). In Mysore district this was recorded for the first time on 23-11-1971, when only two individual plants were seen (Ramaswamy *et al.* 1972-73). Though these plants were uprooted and burnt, today however this has become a dominant weed in many parts of the district. Within a short span of 25 years this weed has established itself to such an extent all over the state of Karnataka, that it is the only dominant weed now.

Papilionaceae, Poaceae, Amaranthaceae, Euphorbiaceae, Solanaceae, Cyperaceae, Malvaceae, Scrophulariaceae and Convolvulaceae are some other families with a large number of introduced weeds in the district (Table 1).

Maheshwari (1962) has discussed in detail about the route in which these weeds have migrated with reference to India; and Srivastava (1964) has discussed the way in which some of these weeds probably might have been introduced. In the present account an

TABLE 1

FAMILIES SHOWING THE NUMBER OF INTRODUCED GENERA AND SPECIES

Family	Number of genera	Number of Species
Asteraceae	24	27
Papilionaceae	11	18
Poaceae	13	17
Amaranthaceae	8	12
Euphorbiaceae	6	12
Solanaceae	5	9
Cyperaceae	2	8
Malvaceae	4	7
Tiliaceae	1	6
Caesalpinaceae	2	5
Convolvulaceae	2	5
Scrophulariaceae	4	4
Cactaceae	1	3
Caryophyllaceae	3	3
Lamiaceae	3	3
Polygonaceae	2	3
Rubiaceae	2	3
Verbenaceae	2	3
Acanthaceae	2	2
Boraginaceae	1	2
Chenopodiaceae	1	2
Cleomaceae	1	2
Hydrocharitaceae	2	2

Rest 26 families with one genus and one species in each.

enumeration of all the introduced weed species of Mysore district with their probable native countries is given in tabular form (Table 2). However, no effort is made to give their years of introduction and establishment, since many of them have been repeatedly brought and introduced in different parts at different times.

All the specimens enumerated are deposited in the Herbarium, Manasagangothri, University of Mysore, Mysore (MGM).

ACKNOWLEDGEMENTS

We are thankful to Dr. B. A. Razi, Professor and Head of the Department of Botany, University of Mysore, Manasagangothri, Mysore for constant guidance and facilities and to Dr. P. S. Ramakrishnan, Professor and Head of the Department of Botany, School of life Sciences, NEHU, Shillong for encouragement. One of us (R. R. Rao) is also thankful to the University Grants Commission for the award of a fellowship during the tenure of which the present work was carried out.

TABLE 2

ENUMERATION OF INTRODUCED WEEDS OF MYSORE DISTRICT

No.	Species	Family	Native Country Region	Remarks
1.	<i>Abelmoschus moschatus</i> Medic. (<i>Hibiscus abelmoschus</i> L.)	Malvaceae	Paleotropical	Rare ; often cultivated.
2.	<i>Abrus precatorius</i> L.	Papilionaceae	Pantropical	Common all over the district ; not abundant.
3.	<i>Acalypha ciliata</i> Forsk.	Euphorbiaceae	Paleotropical	Common in shady moist places.
4.	<i>Acanthospermum hispidum</i> DC.	Asteraceae	Brazil	Common all over on fallow fields.
5.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Trop. America	Common in plains.
6.	<i>Adathoda vasica</i> Nees	Acanthaceae	Trop. Asia	Cultivated for its medicinal uses ; but fairly run wild also.
7.	<i>Adenostemma lavenia</i> (L.) Ktz. (<i>A. viscosum</i> Forst.)	Asteraceae	South America	Frequent.
8.	<i>Aeschynomene americana</i> L.	Caesalpinaceae	Trop. America	Common.
9.	<i>Ageratum conyzoides</i> L.	Asteraceae	South America	Escape, very abundant all over.
10.	<i>Allamanda cathartica</i>	Apocynaceae	Trop. America	Escape ; mostly cultivated.

WEEDS IN THE VEGETATION OF MYSORE DISTRICT

No.	Species	Family	Native Country Region	Remarks
11.	<i>Alternanthera ficoidea</i> (L.) R. Br.	Amaranthaceae	Trop. America	Common in ponds and ditches.
12.	<i>A. pungens</i> H. B. & K. (<i>A. echinata</i> Sm.)	" "	"	Common in open grassy soils.
13.	<i>A. sessilis</i> (L.) R. Br. (<i>A. paronychioides</i> St. Hil.)	" "	"	Frequently associate with other Amaranthaceae members.
14.	<i>Amaranthus gracilis</i> Desf. (<i>A. viridis</i> Hk. f. non L.)	" "	Pantropical	Common weed in vegetable gardens.
15.	<i>A. spinosus</i> L.	" "	"	Common near human habita- tions.
16.	<i>Anagallis arvensis</i> L.	Primulaceae	Europe	Rare, in B.R. Hills.
17.	<i>Antigonon leptopus</i> Hk. & Arn.	Polygonaceae	South America	Cultivated but runs wild in some places.
18.	<i>Argemone mexicana</i> L.	Papaveraceae	Cent. America	Common and abundant in some fallows.
19.	<i>Asclepias curassavica</i> L.	Asclepiadaceae	South America	Rare, near water margins.
20.	<i>Bacopa monnieri</i> (L.) Penn.	Scrophulariaceae	Cosmop-Trop.	Common all over in marshy places.
21.	<i>Barleria cristata</i> L.	Acanthaceae	Paleotropical	Frequent, not abundant.
22.	<i>Biophytum sensitivum</i> DC.	Geraniaceae	Pantropical	Common in shades.
23.	<i>Blainvillea acmella</i> (L.) Philipson (<i>B. latifolia</i> DC.)	Asteraceae	"	Common.
24.	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	"	Very common all over the waste lands.
25.	<i>Borreria articularis</i> (L.f.) F.N. Will. (<i>B. hispida</i> Schum.)	Rubiaceae	Paleotropical	Common in agricultural fields.
26.	<i>B. stricta</i> (L.f.) Schum.	"	"	Common in agricultural fields.
27.	<i>Brachiaria mutica</i> (L.) Stapf	Poaceae	Europe	Occasional.
28.	<i>Brugumontia suaveolens</i> Bracht. & Presl. (<i>Datura suaveolens</i> H.B.K.)	Solanaceae	Mexican	Common in Higher elevations of B. R. Hills.
29.	<i>Calceolaria mexicana</i> Benth.	Scrophulariaceae	Mexico	Recent; abundant only in coffee estates.
30.	<i>Canscora diffusa</i> R. Br.	Gentianaceae	Paleotropical	Common in marshy places.
31.	<i>Cardiospermum halicacabum</i> L.	Sapindaceae	Pantropical	Isolated in bushes and plains. (waste lands).
32.	<i>Cassia occidentalis</i> L.	Caesalpiniaceae	South America	Common all over the district.
33.	<i>C. pumila</i> Lamk.	"	Pantropical	Rare; common in B.R. Hills.
34.	<i>C. sophera</i> L.	"	South America	Common.
35.	<i>C. tora</i> L.	"	"	Common.
36.	<i>Celosia argentea</i> L.	Amaranthaceae	Pantropical	Weed of sorghum and maize fields.
37.	<i>Ceratophyllum demersum</i> L.	Ceratophyllaceae	Trop. America	Not common.
38.	<i>Chenopodium album</i> L.	Chenopodiaceae	Paleotropical	Weed of vegetable gardens.
39.	<i>C. ambrasioides</i> L.	Chenopodiaceae	Mexico	Weed of vegetable gardens.
40.	<i>Chloris barbata</i> Sw.	Poaceae	Trop. America	Common all over the district.
41.	<i>Cleome gynandra</i> L. (<i>Gynandropsis pentaphylla</i> (L.) DC.	Cleomaceae	Pantropical	Common all over the district.
42.	<i>C. monophylla</i> L.	Cleomaceae	Afro-asian	Frequent.
43.	<i>Clitoria ternatea</i> L.	Papilionaceae	Paleotropical	Common.
44.	<i>Convolvulus arvensis</i> L.	Convolvulaceae	European	Common climber.

ENUMERATION OF INTRODUCED WEEDS OF MYSORE DISTRICT

TABLE 2—(Contd.)

No.	Species	Family	Native Country Region	Remarks
45.	<i>Corchorus aestuans</i> L.	Tiliaceae	Trop. America	Weed of waste lands and cultivated fields, common all over the plains.
46.	<i>C. capsularis</i> L.	Tiliaceae	Trop. America	Weed of waste lands and cultivated fields, common all over the plains.
47.	<i>Corchorus fascicularis</i> Lamk.	Tiliaceae	Paleotropical	Weed of open places and cultivated lands; common throughout the district.
48.	<i>C. olitorius</i> L.	Tiliaceae	Pantropical	Weed of open places and cultivated lands; Common throughout the district.
49.	<i>C. tridens</i> L.	Tiliaceae	Pantropical	Weed of open places and cultivated lands; Common throughout the district.
50.	<i>C. trilocularis</i> L.	Tiliaceae	Paleotropical	Weed of open places and cultivated lands; Common throughout the district.
51.	<i>Coronopus didymus</i> (L.) Sm. (<i>Senebiera pinnatifida</i> DC.)	Brassicaceae	Trop. America	Common in marshy shady places.
52.	<i>Crossocephalum crepidioides</i> (Benth.) S. Moore	Asteraceae	Trop. Africa	Common in fallow fields and near marshy places.
53.	<i>Crotalaria medicaginea</i> Lamk.	Papilionaceae	Austro-asian	Common.
54.	<i>Croton bonplandianum</i> Baill. (<i>C. sparsiflorus</i> Morong.)	Euphorbiaceae	South America	Dominant weed in the district.
55.	<i>Cymbopogon martinii</i> (Roxb.) Wats.	Poaceae	Afro-asian	Common in higher elevations.
56.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Trop. America	Common.
57.	<i>Cyperus alopecuroides</i> Rottb.	Cyperaceae	Paleotropical	Frequent in marshy and muddy soils; common all over the district.
58.	<i>C. flabelliformis</i> Rottb.	Cyperaceae	Trop. Africa	Frequent in marshy and muddy soils; common all over the district.
59.	<i>C. iria</i> L.	Cyperaceae	Paleotropical	— do —
60.	<i>C. pumilus</i> L.	Cyperaceae	Paleotropical	— do —
61.	<i>C. pygmaeus</i> Rottb.	Cyperaceae	Pantropical	— do —
62.	<i>C. rotundus</i> L.	Cyperaceae	Pantropical	— do —
63.	<i>C. triceps</i> (Rottb.) Endl.	Cyperaceae	Paleotropical	— do —
64.	<i>Dactyloctenium aegyptium</i> (L.) Beauv.	Poaceae	Pantropical	Weed in rice fields and open marshy places.
65.	<i>D. metel</i> L.	Solanaceae	Trop. America	On fallow fields.
66.	<i>Datura stramonium</i> L.	Solanaceae	Paleotropical	On fallow fields.
67.	<i>Desmodium parviflorum</i> DC.	Papilionaceae	Austro-Asian	Not common.
68.	<i>D. triflorum</i> (L.) DC.	Papilionaceae	Pantropical	Common on moist gravelly soils.
69.	<i>Digera muricata</i> (L.) Mart.	Amaranthaceae	Afro-asian	Weed of cultivated fields.
70.	<i>Digitaria adscendens</i> (H.B. & K.) R. & S.	Poaceae	Trop. America	Common.

WEEDS IN THE VEGETATION OF MYSORE DISTRICT

No.	Species	Family	Native Country Region	Remarks
71.	<i>Drymaria cordata</i> (L.) Willd. ex Roem.	Caryophyllaceae	Paleotropical	Common weed in coffee plantation ^g in Biligirirangan hills.
72.	<i>Eclipta prostrata</i> L.f.	Asteraceae	Pantropical	Common in marshy places.
73.	<i>Eichhornia crassipes</i> (Mart.) Solms.	Pontederiaceae	Brazil	Dominant free floating water weed in tanks.
74.	<i>Elephantopus scaber</i> L.	Asteraceae	Pantropical	Rare.
75.	<i>Emilia sonchifolia</i> (L.) DC.	Asteraceae	Afro-asian	Frequent.
76.	<i>Eragrostis cilianensis</i> (All.) Vignolo-Lutari	Poaceae	Afro-asian	Common.
77.	<i>E. plumosa</i> P. Beauv.	Poaceae	Afro-asian	Common.
78.	<i>Erigeron asteroides</i> Roxb.	Asteraceae	Trop. America	Common in higher elevations.
79.	<i>E. canadensis</i> L.	Asteraceae	South America	Dominant in higher elevations.
80.	<i>E. mucronatus</i> DC.	Asteraceae	Mexico	Common all over at higher elevations.
81.	<i>Eupatorium adenophorum</i> Spreng. (<i>E. glandulosum</i> H.B. & K.)	Asteraceae	Mexico	Common at higher elevations.
82.	<i>E. odoratum</i> L.	Asteraceae	Trop. America	Abundant near Karapura, Heggadevana kote and Kakanakote.
83.	<i>Euphorbia geniculata</i> Ort.	Euphorbiaceae	Pantropical	Weed in open fields.
84.	<i>E. hirta</i> L.	Euphorbiaceae	Pantropical	Weed in open fields, Common.
85.	<i>E. prostrata</i> Ait.	Euphorbiaceae	West Africa	Weed in open soils ; Commonly seen with other species.
86.	<i>E. pulcherrima</i> Willd.	Euphorbiaceae	Mexico	Recent ; under cultivation ; rarely escape.
87.	<i>Fimbristylis littoralis</i> Gaud. (<i>F. miliacea</i> (L.) Vahl)	Cyperaceae	Pantropical	Common in marshy places.
88.	<i>Flaveria australasiaca</i> Hook.	Asteraceae	Australian	Common.
89.	<i>Galinsoga ciliata</i> (Rafn.) Blake	Asteraceae	South America	Common all over, but confused with the next species.
90.	<i>G. parviflora</i> Cav.	Asteraceae	South America	Abundant weed along road sides.
91.	<i>Glinus oppositifolius</i> (L.) DC.	Aizoaceae	Paleotropical	Common.
92.	<i>Gomphrena celosioides</i> Mart. (<i>G. decumbens</i> Jack.)	Amaranthaceae	South America	Weed in plains.
93.	<i>Hackelochloa granularis</i> (L.) O. Ktz.	Poaceae	Pantropical	Common in higher elevations.
94.	<i>Heliotropium indicum</i>	Boraginaceae	South America	Weed in open fields.
95.	<i>H. ovalifolium</i> Forsk.	Boraginaceae	Pantropical	Common in dry open soils.
96.	<i>Hibiscus panduraeformis</i> Burm f.	Malvaceae	Paleotropical	Common weed in gardens and hedges.
97.	<i>H. vitifolius</i> L.	Malvaceae	Paleotropical	Common weed in gardens and hedges.
98.	<i>Hypericum japonicum</i> Thunb.	Hypericaceae	Paleotropical	Rare in higher elevations.
99.	<i>Hyptis suaveolens</i> (L.) Poir.	Lamiaceae	South America	Weed in waste lands.
100.	<i>Indigofera astragalina</i> DC.	Papilionaceae	Paleotropical	— do —
101.	<i>I. cordifolia</i> Heyne ex Roth.	Papilionaceae	Paleotropical	— do —
102.	<i>I. linifolia</i> Retz.	Papilionaceae	Paleotropical	— do —
103.	<i>I. linnaei</i> Ali	Papilionaceae	Austro-asian	— do —
104.	<i>I. prostrata</i> Willd.	Papilionaceae	Austro-asian	— do —

ENUMERATION OF INTRODUCED WEEDS OF MYSORE DISTRICT

TABLE 2—(Contd.)

No.	Species	Family	Native Country Region	Remarks
105.	<i>I. trita</i> L.f.	Papilionaceae	Austro-asian	Weed in waste lands.
106.	<i>Ipomoea fistulosa</i> Mart. (<i>I. carnea</i> Jacq.)	Convolvulaceae	South America	Common near villages ; Occasionally cultivated.
107.	<i>I. eriocarpa</i> R. Br.	Convolvulaceae	Paleotropical	Common in plains.
108.	<i>I. pestigridis</i> L.	Convolvulaceae	Paleotropical	Common in plains and in cultivated fields.
109.	<i>I. reptans</i> (L.) Poir. (<i>I. aquatica</i> Forsk.)	Convolvulaceae	Paleotropical	Common along the water margins and muddy soils.
110.	<i>Iseilema laxum</i> Hack.	Poaceae	Trop. America	Rare.
111.	<i>Jatropha curcas</i> L.	Euphorbiaceae	Trop. America	In hedges.
112.	<i>J. glandulifera</i> L.	Euphorbiaceae	Afro-asian	In waste lands.
113.	<i>J. gossypifolia</i> L.	Euphorbiaceae	Trop. America	Weed of waste lands.
114.	<i>Kalanchoe pinnata</i> (Lamk.) Pers.	Crassulaceae	Trop. America	Common along river bank in paschimavahini and often cultivated.
115.	<i>Laggera aurita</i> (Willd.) Sch.-Bip.	Asteraceae	Afro-asian	Aromatic weed in open waste lands.
116.	<i>Lantana camara</i> L. var. <i>aculeata</i> (L.) Moldenke	Verbenaceae	Cent. America	Common all over.
117.	<i>L. indica</i> Roxb.	Verbenaceae	South America	Common at higher elevations.
118.	<i>Legascea mollis</i> Cav.	Asteraceae	Mexico	Common in plains.
119.	<i>Leucas lavendulaefolia</i> Rees. (<i>L. linifolia</i> Spreng)	Lamiaceae	West Asia	Common ; often associated with <i>L. aspera</i> .
120.	<i>Malvastrum coromandelianum</i> (L.) Garcke	Malvaceae	South America	Abundant in waste lands.
121.	<i>Martynia annua</i> L.	Martyniaceae	Mexico	Common in waste lands.
122.	<i>Mecardonia dianthera</i> (Sw.) Penn. (<i>Herpestris chamaedryoides</i> H.B. & K.)	Scrophulariaceae	Trop. America	Common from plains to higher elevations.
123.	<i>Mikania micrantha</i> H. B. & K.	Asteraceae	Trop. America	Very abundant along the cauvery river bank.
124.	<i>Mimosa pudica</i> L.	Mimosaceae	Brazil	Frequent.
125.	<i>Mucuna prurita</i> HK.	Papilionaceae	Pantropical	Rare.
126.	<i>Murdannia dimorpha</i> (Dalz.) Bruck.	Commelinaceae	Pantropical	Occasional.
127.	<i>Nicotiana plumbaginifolia</i> Viv.	Solanaceae	Mexico	Recent, occasional in betel leaf garden.
128.	<i>Nothosaerva brachiata</i> (L.) Wt.	Amaranthaceae	Trop. Africa	In marshy places soon after rains.
129.	<i>Ocimum canum</i> Sims. (<i>O. americanum</i> L.)	Lamiaceae	Afro-asian	Weeds in fallow fields.
130.	<i>Oenothera rosea</i> (Soland.) Ait.	Oenotheraceae		Rare, only in higher elevations.
131.	<i>Oldenlandia corymbosa</i> L.	Rubiaceae	Pantropical	Occasional in marshy places.
132.	<i>Opuntia coccinellifera</i> Mill.	Cactaceae	Mexican	Occasional near villages.
133.	<i>O. dillenii</i> Haw.	Cactaceae	South America	Occasional near villages.
134.	<i>O. elatior</i> Mill.	Cactaceae	South America	Occasional near villages.
135.	<i>Ottelia alismoides</i> (L.) Pers.	Hydrocharitaceae	Austro-asian	Common in tanks and ponds.

WEEDS IN THE VEGETATION OF MYSORE DISTRICT

No.	Species	Family	Native Country Region	Remarks
136.	<i>Oxalis latifolia</i> H.B. & K.	Oxalidaceae	Mexico	Common.
137.	<i>Parthenium hysterophorus</i> L.	Asteraceae	Trop. America	One of the recent adventives to the district.
138.	<i>Passiflora foetida</i> L.	Passifloraceae	South America	Rare climber.
139.	<i>Pennisetum purpureum</i> Schum.	Poaceae	Trop. Africa	Occasional in gardens.
140.	<i>Peperomia pellucida</i> H.B. & K.	Piperaceae	Cent. America	Weed in gardens specially in shady green houses.
141.	<i>Phyllanthus asperulatus</i> Hutch.	Euphorbiaceae	Trop. America	Common weed in gardens.
142.	<i>Physalis minima</i> L.	Solanaceae	Paleotropical	Common on open fields.
143.	<i>P. peruviana</i> L.	Solanaceae	Trop. Africa	Common on open fields.
144.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Geront Trop.	In hedges, occasional in plains.
145.	<i>Polycarpaea corymbosa</i> Lamk.	Caryophyllaceae	Pantropical	In open grassy fields.
146.	<i>Polygonum barbatum</i> L.	Polygonaceae	Paleotropical	In marshy places.
147.	<i>P. hydropiper</i> L.	Polygonaceae	Temperate	In marshy places.
148.	<i>Portulaca oleracea</i> L.	Portulacaceae	Paleotropical	Common all over the district.
149.	<i>Potamogeton nodosus</i> Poir.	Potamogetonaceae	Temperate	Rare in tanks.
150.	<i>Pupalia lappacea</i> (L.) Juss.	Amaranthaceae	Afro-Asian	Rare in the district.
151.	<i>Rhynchosia minima</i> DC.	Papilionaceae	Pantropical	Common in open fallow fields.
152.	<i>Rivina humilis</i> L.	Phytolacaceae	South America	Rare weed in betel gardens.
153.	<i>Saccharum spontaneum</i> L.	Poaceae	Paleotropical	Occasional.
154.	<i>Scoparia dulcis</i> L.	Scrophulariaceae	South America	Common.
155.	<i>Sebastiania chamalea</i> (L.) Muell.-Arg.	Euphorbiaceae	Paleotropical	Common.
156.	<i>Sesbania bispinosa</i> (Jacq.) Faw. & Rendle (<i>S. aculeata</i> Pers.)	Papilionaceae	Pantropical	Weed in gardens occasionally cultivated.
157.	<i>Setaria glauca</i> P. Beauv.	Poaceae	Eurasian	Occasional in plains.
158.	<i>S. verticillata</i> (L.) P. Beauv.	Poaceae	Austro-Asian	Occasional in plains.
159.	<i>Sida alba</i> L. (<i>S. spinosa</i> L.)	Malvaceae	Pantropical	Common.
160.	<i>S. cordifolia</i> L.	Malvaceae	Pantropical	Common.
161.	<i>S. veronicaefolia</i> Lamk.	Malvaceae	Trop. America	Common.
162.	<i>Solanum elaeagnifolium</i> Cav.	Solanaceae	Mexico	Rare.
163.	<i>S. seaforthianum</i> Andr.	Solanaceae	Trop. America	Occasional in hedges.
164.	<i>S. surattense</i> Burm. f. (<i>S. xanthocarpum</i> Schrad & Wendl.)	Solanaceae	Paleotropical	Frequent.
165.	<i>Sonchus oleraceus</i> L.	Asteraceae	Paleotropical	Common throughout the district.
166.	<i>S. wightianus</i> DC. subsp. <i>wightianus</i> Boulos (<i>S. arvensis</i> L.)	Asteraceae	European	Common.
167.	<i>Sphaeranthus indicum</i> L.	Asteraceae	Africa	Common in marshy places.
168.	<i>Sporobolus diander</i> (Retz.) Beauv.	Poaceae	Austro-Asian	Common.
169.	<i>Stachytarpheta jamaicensis</i> (L.) Vahl (<i>S. indica</i> Vahl)	Verbenaceae	Paleotropical	Common in fallows.
170.	<i>Stellaria media</i> Cyr.	Caryophyllaceae	European	Rare.
171.	<i>Synadenium grantii</i> Hk. f.	Euphorbiaceae	Trop. Africa	Plants all over the district.
172.	<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae	Trop. America	Frequent.
173.	<i>Tephrosia purpurea</i> Pers.	Papilionaceae	Pantropical	Common all over on waste lands.

TABLE 2—(Contd.)

No.	Species	Family	Native Country Region	Remarks
174.	<i>Teramnus labialis</i> Spr.	Papilionaceae	Pantropical	Not a common plant in the district.
175.	<i>Tithonia diversifolia</i> A. Gray	Asteraceae	Mexican	Rare.
176.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Pantropical	Prostrate weed on open fields.
177.	<i>Tridax procumbens</i> L.	Asteraceae	Mexico	Common in open places among grasses.
178.	<i>Urochloa panicoides</i> P. Beauv.	Poaceae	Geront Trop.	Common in open places.
179.	<i>Vallisneria spiralis</i> L.	Hydrocharitaceae	Pantropical	Common in streams.
180.	<i>Vernonia cinera</i> (L.) Juss.	Asteraceae	Pantropical	Common.
181.	<i>Vigna trilobata</i> (L.) Verdc. (<i>Phaseolus trilobus</i> L.)	Papilionaceae	Afro-Asian	Occasional in open soils.
182.	<i>Wedelia calendulacea</i> Less.	Asteraceae	Austro-Asian	Rare, in marshy places.
183.	<i>Xanthium strumarium</i> L.	Asteraceae	South America	Common all over in fallow fields.
184.	<i>Zornia diphylla</i> Pers. (<i>Z. gibbosa</i> Span.)	Papilionaceae	Pantropical	Common in plains on open grassy soils.

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